HUALAPAI CULTURAL RESOURCES STUDIES

THIRD QUARTERLY REPORT

APR, MAY, JUN, FY94

APRIL

- 3 to 7th, L.J. participated with Grand Canyon Park Service personnel on a River Corridor monitoring trip (archaeological work trip) that took place from March 28 to April 7 (Lees Ferry to Diamond Creek). LJ started from the lower half from Phantom Ranch to Diamond Creek on April 3 to 7th. A total of 19 sites were monitored, including one single test excavation near the boundary of the Hualapai Indian Reservation, near river mile 163 on right bank. LJ, as representative from Cultural Resources, was present during "on site test excavations" and closely monitoring the activities of the Park Service Staff. The monitoring of sites in the areas of **Hualapai ancestral territories**, as well as the Hualapai Indian Reservation, proved the on-going impacts occurring from tourism, as well as science-related trips. LJ has made recommendations to the Park Service personnel which are documented on the **River Corridor Archaeological Site Monitoring Forms for Grand Canyon National Park** (see enclosed river trip report submitted to Jan Balsom from Christopher Coder).

- 11th, LJ presented S.1021 (Religious Freedom Bill) to the Tribal Council. On the 15th presented the United Nation's Draft Declaration of Human Rights for Indigenous People to the Tribal Council. (Consensus to submit a resolution to the effect to support bill.)

Transcribing and interpretation of oral interviews is on-going. The additional information will be analyzed to be incorporated into the Ethnographic and Oral Historical Survey Report. - * 29th, Cultural Resource

secretary, Celeste Powskey, resigns to move to Phoenix, Az.

MAY

- April 30 to May 5th, LJ attended annual **"Keepers of the Treasure"** conference in Warm Springs, Oregon. **"Repatriation"** was the theme of the conference. LJ was elected to serve on the Board of Directors for **KEEPERS** in representing the Phoenix Region (21) tribes of Arizona (for three years) in cultural resource management and preservation. The repatriation issues facing tribes regarding NAGPRA is the lack of funding to implement the regulations. Other issues involve lack of **consultation** or **misinterpretation** of the term consultation stemming from federal agencies. Tribal issues involve the sacredness of handling ancestral human remains and caring for the disposition of such remains. The most important and cultural education stemmed from the Tribal Host (Warm Springs Confederated Tribes) who have traditional practices of embalming and dressing their decease. These practices are passed down from elder medicinal people to younger medicinal people. Their sole purpose is to serve the tribal members in these matters prior to burials. Other controversies involve sacred objects and items and legal battles with auction houses that sell these items to the public and private sectors as **art**. The awareness is evident that in pursuing the integrity of what the **Act** intends, that the burden lies with tribes and the work towards achieving these goals will never be finished in our life time (agenda of KEEPERS Conference is enclosed).

- * 9th, hired Stormy Beecher as secretary.

- On 10 & 11th (Chris W.) attended **1994 Southwest American Indian Tourism Conference** in Prescott, Az on tourism trends. Topics included promoting acceptable environmental, cultural, economical & sustainable tourism as

defined on the local level.

- 10th to 13th LJ attended GCD-EIS Cooperative meetings in Phoenix, Az. with Don & Clay.

- 16th to 19th, Ronald & Susan attended video workshop at the Peach Springs Elementary School. A video workshop was presented by Mr. Dave Smith, a self employed video specialist from Phoenix, Az. The workshop included basic editing and the process of working with different components of video machines to produce a first rate video recording. The overall training program was beneficial to the Cultural Resources staff.

- 20th, planning meeting at GCES, Flagstaff, with Phyllis Hogan, Art Phillips, Ronald S., Loretta J. & Donald B. with Dave W. on the proposed ethnobotanical native species plant studies for mid June.

- 21st, Advisory Team Meeting was held at the Cultural Resources Program Office, updated elders on current and up-coming projects. Three presentations were given by LJ, Chris and Susan.

- 24 & 25th **GRCA** Park Service personnel, Chris Coder conducted an archaeological field training to Natural Resources Staff including other departmental employees of the Hualapai Tribe. Training included basic surveying techniques and identification of lithic scatters, pottery shards and archeological features and prominent features.

JUNE

- From May 30th to June 3rd, Chris and Susan attended **The International Rock Art Research Assoc. Conference** in Flagstaff, Az. This was a gathering of over 300 specialist in rock art studies from around the world. Over 140 papers were presented that covered all aspects of rock art research (agenda enclosed). The presenters were mostly foreigners, they presented

their methods and techniques that are unrelated to Native American **worldviews**. The overall impression by attending this conference was beneficial to the staff, however the hypocrisy of exploitation vs. preservation and protection of **rock writing** was evident through advertisements & sales of rock writing paraphernalia.

- 2nd, LJ & Stormy attended meetings in Flagstaff with Phyllis Hogan & Art Phillips regarding Hualapai Ethnobotanical Native Species Plant Study Rivertrip scheduled for June 12-15.

- * 7th, hired Darlene Bender as new Technician Trainee for Cultural Resources.

- * On the 10th, hired Cheryle Beecher as new Technician I.

- * On the 14th, Susan Elias, Technician, resigned due to personal reasons.

- 12th to 15th, Botanist; Art Phillips, Ethnobotanist; Phyllis Hogan, Hualapai Elders; Emmett Bender, Mazie Powskey & Betty Wescogame, Cultural Resources Staff; LJ, Ronald Susanyatame, Cheryle, Darlene & GIS Technician; Ronnie Quasula Jr. participated in **The Hualapai Ethnobotanical Native Plant Study, Initial Reconnaissance River Trip** from Diamond Creek to Pierces Ferry. Ethnographic surveys were conducted as related to the ethnobotancial native species of the Colorado River, Grand Canyon. Audio Recorders were utilized and field notes in documenting and recording the historical usages of the native plants. All recorded tapes are currently being transcribed into manuscript form. The river trip was in part successful due to the Elders participation, and in pat due to the Boatman/Cook; Danny Lee Jr. & Wildlife Technician Trainee; Ronnie Beecher Jr. for their enthusiastic & dedicated river support (see rivertrip reports submitted by Art Phillips & Phyllis Hogan).

- 21st, attended meeting with Dave W. @ GCES, Flagstaff, to update (debrief)

about results of the June rivertrip. Those attending included LJ, Clay B., Phyllis H. & Art P. Recommendations stemming from the meeting included a rivertrip proposal for the upper portion of the reservation, from Whitmore Pad to Pierces Ferry on the dates of September 7th to 14th.

MEMORANDUM

TO: Jan Balsom, Park Archaeologist

FROM: Christopher Coder, Project Archaeologist

SUBJECT: 94-3 River Corridor Monitoring Trip

DATE: April 11, 1994

From March 28 to April 7 this office conducted an archaeological work trip from Lees Ferry to Diamond Creek. For this particular trip a motorized snout rig was utilized with a crew of four plus a boatman (see attached list). The work accomplished on the trip consisted of a mixed bag of tasks: monitoring, placement of surface analysis units, test excavation, site recording and some minor survey.

Eight 1 x 1 m surface analysis units on six sites were established, bringing the total to 13 now placed between Lees Ferry and lower Unkar. More of these units will be established in the west end.

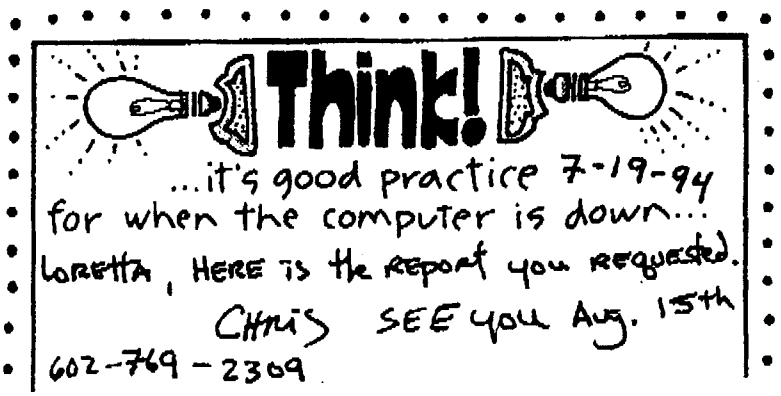
A single site was recorded (AZ:C:13:468) in the vicinity of Unkar delta that consisted of a complete trough metate in an overhang. No other artifacts or carbon were observed. No sediment exists at this location so testing would be moot. The recommendation for this property is no further work needed; monitor in alternate years.

A single test excavation was done to determine significance or lack thereof at AZ:B:09:319 in Reach 10. No cultural materials were recovered from the unit and bedrock was encountered within 10 cm of the surface. This is the final site in the suite of properties designated to be tested by SHPO. Lisa Leap (NPS Archaeologist) from our Flagstaff office is producing a report concerning these specific sites. / get.

Some monitoring -survey was carried out below Basalt Canyon on river right in an extensive dune field which produced no cultural materials during the initial survey. This minor survey was done to see if any materials were coming out at this time. None were observed. The resurvey took our four-person crew approximately 90 minutes. This location should be monitored in this fashion periodically, as should others in Reaches 4 and 5.

Nineteen sites were monitored using the new streamlined form. Impacts observed were relegated to minor events, including some surface disturbances, burrowing, and an occasional footprint. This can be attributed to the mild winter and lack of surface runoff this spring compared to last year. A few sites in the west end were passed over until September due to the thick cover of grasses which obscure any change (as well as protect the resource). Regarding changes and observations noted during this trip, see attached list.

In conclusion, I would like to thank our office staff for their excellent preparation, the crew for their stalwart help through wind and sun, and the support of the river subdistrict.



Personnel List for 94-3

Upper Half:

Christopher Coder, Project Archaeologist
Larrynn Occhiello, Staff Archaeologist
Jamie Cochary, North Rim Archaeologist
Lyndon Murray, Quaternary Studies, NAU
Dave Christiensen, NPS Boatman

Lower Half:

Christopher Coder
Larrynn Occhiello
Lyndon Murray
Dave Christiensen
Loretta Jackson (Hualapai Cultural Representative)

C:09:051 No change.

C:09:052 No change.

C:09:082 Minor surface erosion, including the eolian removal of minor amounts of sand at Features 1 and 2. Animal trailing is ongoing at both features and is crunching the ceramics at Feature 2.

C:13:006 Ongoing surface erosion of site as well as headward movement of gullies, particularly downslope from the datum. Portions of the bank are slumping into the secondary drainage below the site. Animal trailing is ever present and the footprints of two hikers were observed on the periphery of the site. The mesquite on the slope is essentially holding the site in place.

C:13:007 This site was stabilized in November of 1992, with particular attention being paid to Feature 5, a possible burned structure adjacent to the secondary drainage. Feature 5 was protected by a boulder wall constructed by the trail crew. At some recent time localized rain and the subsequent runoff has destroyed the upper portion of the protective wall, once again exposing Feature 5. The rest of the site remains stable and better protected thanks to the retrailing in the adjacent river camp.

B:16:262 Stable. No change. This is the historic USGS gauging station at Bright Angel and it should only be monitored in cases of flows in excess of 40,000 cfs.

B:15:124 The historic inscription of George Parkins shows no change. However, the beach at this location (Bass boat beach) is in a state of flux and a large gully is currently developing on the downstream side.

B:10:227 No change. No apparent visitation.

B:13:002 Site is currently stable. Some minor cliff spalling and animal trailing is ongoing at Locus B. The Hualapai cultural representative, Loretta Jackson, would like B:13:002 to be monitored spring and fall by no more than two archaeologists. Furthermore, Ms. Jackson would like the project office to talk to Dr. Robert Euler concerning this particular site.

A:16:151 This is the first monitoring episode since the original survey for A:16:151. Minor ongoing surface erosion is occurring at Locus A. This is mainly the result of the central portion of the roaster acting as a funnel for runoff. Minor spalling and animal activity is ongoing in the rockshelter downstream at Locus B. Ms. Jackson would like this site also monitored spring and fall by no more than two archaeologists.

A:16:158 Currently stable. No movement of artifacts. There is a 2 to 6 cm accumulation of eolian sand in portions of the shelter that was not previously there. This sediment is probably derived from the excessive loose deposits that settled out during the Little Colorado River flood of 1993 on the extensive sand bar located just downstream from the site.

A:16:003 Minor ongoing rearrangement of artifacts and surface sediment due to animals. Also, people occasionally sleep here during rain storms. Heavy visitation due to proximity to popular camping beach.

A:15:027 This site is presently stable and in good condition. Some minor trailing through the site due to big horn sheep traffic. Access is from the rocky drainage on the upstream side of the site to keep the effects of monitoring to a minimum. Ms. Jackson would like to have A:15:027 monitored on an annual basis.

A:15:021 First monitoring effort since the initial survey. Minor surface erosion and movement of smaller rock fragments. The nearly intact fire feature is on the threshold of coming apart. It may be advisable to collect a ^{14}C sample in the near future. Due to the continued low flows, a camping beach has evolved 100 yards downstream from the site on a 20,000+ cfs sand bar. It is recommended that this site be monitored on a yearly basis, preferably in October.

A:15:025 The hematite mine is being heavily visited since the initial survey ended due to interest from the Native American community. A distinct trail is developing from the parking beach, through the drainage, and up the steep rocky slope to the processing bench. It is recommended that the site be monitored officially once a year and that some policy be formulated concerning visitation and extraction. The opinions of the cooperating tribes and agencies is here solicited.

A:15:039 No change. Currently stable. Ongoing bighorn sheep presence. Coyote scat is common. Ms. Jackson requests annual monitoring.

A:15:042 The bulk of the site is currently stable. A trail from the boat beach to the Kolb inscription now cuts through a hearth situated in the overflow bank of the adjacent side canyon. This trail is new, one year old, and comes directly up the main drainage instead of across the lower beach as it did previously. A substantial side canyon flood in the late spring of 1993 altered the stream bed considerably, removing dense stands of vegetation and allowing this new access. Presently a profusion of grass and wildflowers covers the site.

G:03:046 First monitoring since the initial survey. This small fragile site is located in a dune blowout below the mesquite line. It occupies approximately 3 sq m of surface area and consists of fire-altered rock, a sherd, and a few flakes. G:03:046 is hard to locate and should be monitored by a single archaeologist to keep impact to a bare minimum. It is recommended that this site be monitored annually. The site was releveled on this trip and it was established that it is located 17 feet above 28,000 cfs.

G:03:003 The trail that leads from the rockshelter directly into the wash is becoming more entrenched and should be blocked off. Minor impacts from visitation, mostly research trips. Some testing was done on the ridge between features by the USGS. This work was monitored by a Park Service archaeologist and a representative of the Hualapai Tribe.

Grand Canyon National Park
RIVER CORRIDOR ARCHAEOLOGICAL SITE MONITORING FORM

MANAGEMENT

1. Site Number AZ: _____ 2. Monitor Session _____

3. River Mile/Bank _____ 4. Date _____

5. Monitor (s) _____

6. Site Type _____

NATURAL IMPACTS

0 = Absent; 1 = Present/Stable; 2 = Increase; 3 = Decrease; 4 = NA (for items 7 - 14)

		Structures	Artifacts	Roasters/ Hearths	Perishables (midden)	Rock Art	Other
7.	Surface Erosion (0-10cm)						
8.	Gullying (10-100cm)						
9.	Arroyo Cutting (>1m)						
10.	Bank Slumpage						
11.	Eolian/Alluival Erosion/Depostion						
12.	Side Canyon Erosion						
13.	Animal-Caused Erosion						
14.	Other Natural Impacts (spalling, roots)						

15. If arroyos or gullies are present, do they drain to the river? (Note: Some drainages die out in dune fields or on terraces before reaching the river.) 0 = no; 1 = yes; 2 = NA

_____

16. Do any of the above impacts appear to have occurred since the last monitoring episode? 0=no; 1=yes
If yes, explain in 17.

_____

17. Comments:

HUMAN IMPACTS

0 = Absent; 1 = Present/Stable; 2 = Increase; 3 = Decrease; 4 = NA (for items 18 - 24)

18.

	Structure/ Storage	Artifacts	Roasters/ Hearths	Perishables/ Midden	Rock Art	Other
Visitor Impacts						

19. Collection Piles: If present, explain in 26. _____

20. Trails: If present, explain in 26. _____

21. On-site Camping: If present, explain in 26. _____

22. Criminal vandalism/ARPA violations: If present, explain in 26. _____

23. Other: If present, explain in 26. _____

24. Human impacts since last monitoring: _____

25. Are any human impacts directly related to river fluctuations and/or dam operations? 0 = no; 1 = yes
If yes, explain in 26 (i.e., development of new trails to avoid high water, availablity of new beaches in proximity of site).

_____

26. Comments:

MANAGEMENT ASSESSMENT AND RECOMMENDATION

27. Monitor Schedule: 1) discontinue 2) biannually 3) annually
4) every-other-year 5) every three to five years

_____

28. Monitor with a stationary camera: 0 = no; 1 = yes

_____

29. Recommended measures to reduce site impacts: 0 = no; 1 = yes

Retrail _____ Plant vegetation _____ Stabilize _____

Obliterate Trail(s) _____ Install Check Dams _____ Close site to visitors _____

30. Recommended measures to protect the site's integrity: 0 = no; 1 = yes

Surface collect entire site _____ Test for depth of subsurface cultural deposits _____

Map as a form of data recovery _____ Excavate entire site _____

31. Comments: (e.g., test unit)

International Rock Art Congress 1994

Schedule of Events

Friday, May 27, 1994

7:00 pm	Exhibit Opening: International Rock Art Exhibition '94—*Photography, Sculpture, and Two-Dimensional Work* Dr. Joel Eide, Director, Old Main Building, Northern Arizona University Campus

Saturday, May 28, 1994

8:00 am	One Day Field Trips Field Trip from Phoenix to Flagstaff (Commercial) Commercial Field Trips
2:00 pm - 6:00 pm	Congress Registration - Little America

Sunday, May 29, 1994

8:00 am	One Day Field Trips Commercial Field Trips
10:00 am - 6:00 pm	Congress Registration - Little America
6:00 pm	Exhibit Opening: *Artists Meet Across the Ages—Footnote* Elanie Moore, 9 N. Leroux, Downtown Flagstaff
6:00 pm	Exhibit Opening: *Rock Art Photos from the Southwest* Donald E. Weaver and Peter Pilles, Hotel Wetherford, Downtown Flagstaff
6:30 pm - 8:00 pm	Reception (No Host) - Little America
8:00 pm	Welcome: Donald Weaver, President, ARARA Theme Presentation: *Rock Art—World Heritage*, Paul Bahn

Monday, May 30, 1994

7:00 am	Congress Registration - du Bois Center, Northern Arizona University Campus (NAU)
8:00 am - 10:00 am	***Opening Ceremonies and Official Welcome*** - du Bois Center Welcome and Opening Remarks: Donald Weaver, President, ARARA, and Diane Hamann, Program Chair, IRAC '94 Keynote Speech: *Rock Art World Views and Contemporary Issues*, Polly Schaafsma ARARA Conservation and Preservation Award Presentation: Larry Loendorf, Chair, ARARA Conservation Committee Recipient: Comte Robert Bégouën, Montesquieu-Avantè, France

Schedule of Events

10:15 am - 12:15 pm	Presentation of Papers, Morning Sessions - Social & Behavioral Sciences (SBS) Building and du Bois Center, NAU
12:15 pm - 1:15 pm	Lunch
1:15 pm - 5:30 pm	Presentation of Papers, Afternoon Session - du Bois Center
7:00 pm	**Public Seminar**: *Rock Art, Shamanism and Neuropsychology: South Africa and Beyond*, J. D. Lewis-Williams du Bois Center

Tuesday, May 31, 1994

8:00 am - 12:15 am	Presentation of Papers, Morning Sessions - SBS Building & du Bois Center
12:15 pm - 1:15 pm	Lunch
1:15 pm - 5:30 pm	Presentation of Papers, Afternoon Session - du Bois Center
7:00	**Public Lectures:** *Archaeology and the Goddess: Interpreting Images from the Past*, Meg Conkey *Caves, Temple-Mountains, and the Otherworld in the Olmec and Maya Tradition*, Linda Schele Cline Library Auditorium, NAU

Wednesday, June 1, 1994

8:00 am - 12:15 am	Presentation of Papers, Morning Sessions - SBS Building & du Bois Center
12:15 pm - 1:15 pm	Lunch
1:15 pm - 5:30 pm	Presentation of Papers, Afternoon Session - du Bois Center
7:00 pm	Reception, Museum of Northern Arizona Hosted by the Museum, Highway 180 North

Thursday, June 2, 1994

8:00 am - 12:15 am	Presentation of Papers, Morning Sessions - SBS Building & du Bois Center
12:15 pm - 1:15 pm	Lunch
1:15 pm - 5:30 pm	Presentation of Papers, Afternoon Session - du Bois Center
7:00	**Public Lectures**: *The Culture and Rock Art of Australian Aborigines*, Josephine Flood *Rock Art under the Sea: Discovery and Interpretation of a Submerged 27,000 Year Old Paleolithic Art Gallery*, Jean Clottes Cline Library Auditorium, NAU

Schedule of Events

Friday, June 3, 1994

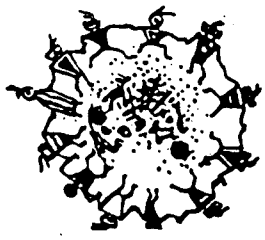
8:00 am	-	9:00 am	ARARA Business Meeting - du Bois Center
8:00 am	-	9:00 am	IFRAO Business Meeting - SBS Building
9:30 am	-	12:00 pm	Presentation of Papers, Morning Sessions - SBS Building & du Bois Center
12:00 pm	-	1:15 pm	Lunch
1:15 pm	-	5:50 pm	Presentation of Papers, Afternoon Session - du Bois Center
6:30 pm			Farewell Hoedown! (No Host Bar) - Best Western Woodlands
8:00 pm			Farewell Banquet - Best Western Woodlands

Saturday, June 4, 1994

8:00 am — One Day Field Trips

Sunday, June 5, 1994

8:00 am — One Day Field Trips



KEEPERS OF THE TREASURES ANNUAL CONFERENCE
MAY 1-4, 1994
WARM SPRINGS INDIAN RESERVATION

"REPATRIATION: THE IMPLICATIONS AND IMPLEMENTATION OF THE NATIVE AMERICAN GRAVES PROTECTION AND REPATRIATION ACT."

Agenda

SUNDAY, MAY 1

12:00 p.m.	Conference registration begins at Kah-Nee-Ta
3:00-5:00 p.m.	Reception and tour of the Museum at Warm Springs, sample of traditional foods

MONDAY, MAY 2

7:30 a.m.	Conference registration
9:00 a.m.	Opening Prayers President's Remarks, **Gordon Pullar, President of Keepers of the Treasures** - Update on Keepers' activities, introductions, summary of conference agenda Welcoming Remarks, Representatives of the Confederated Tribes of the Warm Springs Reservation
10:00 a.m.	Presentations on cultural preservation activities at Warm Springs
11:30 a.m.	Break
11:45 a.m.	Additional presentations by Warm Springs
12:30 p.m.	Lunch at Kah-Nee-Ta
1:45 p.m.	Update on the National Historic Preservation Act Amendments, **Dr. Patricia Parker**, Deputy Chief, Preservation Planning Branch, National Park Service and **Cecil Antone**, Lieutenant Governor, Gila River Indian Community

TUESDAY, MAY 3

8:45 a.m. Overview of agenda, introduction of case study presenters and afternoon workshop panels

Moderator, **Billy Cypress**, Vice-President of Keepers of the Treasures, Director of the Seminole Tribal Museum

9:00 a.m. PRESENTATION OF REPATRIATION CASE STUDIES

- Case studies will illustrate different approaches to organizing and interpreting information, asserting claims, preparing for repatriation or deciding on alternatives to repatriation.

PRESENTERS:

- **Jana Harcharek**, President of Keepers of the Treasures - Alaska
- **Edward Ayau**, Member, Hui Malama I Na Kupuna 'O Hawai'i Nei, a Native Hawaiian Organization
- **Steve Brady**, Northern Cheyenne Cultural Commission
- **Lawrence Hart**, Cheyenne Cultural Center, Oklahoma

(This session will include a break at 10:30 a.m. and a question and answer period from 11:30 - 12:00 p.m.)

12:00 p.m. Lunch at Kah-Nee-Ta

1:30 p.m. WORKSHOP AND DISCUSSION SESSIONS

- The afternoon workshops will provide additional information on how to interpret the summaries and inventories museums and agencies have prepared, how to respond to summaries and get additional information, how to assert claims, and what additional steps are involved throughout the repatriation process. Three workshops will run concurrently from 1:30 - 2:45 p.m. and then will be repeated from 3:00 - 4:15 p.m. for maximum participation.

PANELISTS:

- **Tim McKeown**, NAGPRA Program Leader, National Park Service
- **Karen Cooper**, Office of Museum Programs, Smithsonian Institution
- **Alyce Sadongei**, National Museum of the American Indian, Smithsonian Institution
- **Kate Morris**, the American Indian Ritual Object Repatriation Foundation

(This session will include a break at 2:45 p.m. and a follow-up discussion in plenary session from 4:15 - 5:00 p.m.)

5:00 p.m. Announcements and appreciation, **Curley Youpee**, Cultural Historic Preservation Program, Fort Peck Assiniboine & Sioux Tribes

6:00 p.m. Traditional dinner hosted by the Confederated Tribes of Warm Springs. Remarks will be made during dinner by **Jim Noteboom**, Tribal Attorney, and **Wendall Jim**, Director of the Cultural Heritage Committee

8:00 p.m. Discussion on how the Warm Springs Confederated Tribes take care of the deceased according to tradition led by traditional undertakers

WEDNESDAY, MAY 4

9:00 a.m. MEMBERSHIP MEETING

Consideration of motions to amend the Bylaws

Elections to fill vacancies on the Board of Directors

Consideration of motions to adopt resolutions

Adjournment

12:00 p.m. Check-out

NATIVE AMERICAN GRAVES PROTECTION REVIEW COMMITTEE

PURPOSE: Monitor and review the implementation of the inventory and identification process and repatriation activities required under sections 5, 6, and 7 of the American Indian Graves Protection and Repatriation Act.

AUTHORITY: Section 8 of Public Law 101-601, November 16, 1990.

TERMS: Five years.

MEMBERSHIP: Seven members.

MEMBER	TERM EXPIRES	NOMINATING SOURCE
Ms. Tessie Naranjo, Chair P. O. Box 1807 Española, New Mexico 87532 telephone: (505) 753-7326 fax: (505) 753-8988	March, 1997	Santa Clara Indian Pueblo
Ms. Rachel Craig Northwest Arctic Borough P.O. Box 1110 Kotzebue, Alaska 99752 telephone: (907) 442-2500 fax: (907) 442-2930	March, 1997	Treasures for Our Children Group Northwest Arctic Borough Fairbanks Native Association
Dr. Jonathan Haas Field Museum of Natural History Roosevelt Road at Lake Shore Drive Chicago, Illinois 60605 telephone: (312) 922-9410 fax: (312) 663-5397	August, 1997	Review Committee members
Mr. Dan L. Monroe Peabody & Essex Museum East India Square Salem, Massachusetts 01970 telephone: (508) 745-1876 fax: (508) 744-6776	March, 1997	American Association of Museums Museum Trustee Association

MEMBER	TERM EXPIRES	NOMINATING SOURCE
Dr. Martin E. Sullivan Heard Museum 22 E. Monte Vista Road Phoenix, Arizona 85004-1480 telephone: (602) 251-0227 fax: (602) 252-9757	March, 1997	American Association of Museums Museum Trustee Association
Mr. William Tallbull Dull Knife Memorial College 1 College Drive Lame Deer, Montana 59043 telephone: (406) 477-6215 fax: (406) 477-6219	March, 1997	Northern Cheyenne Tribe
Dr. Phillip L. Walker Department of Anthropology University of California Santa Barbara, California 93106 telephone: (805) 893-2236 fax: (805) 893-8707	March, 1997	Society for American Archaeology Association of American Universities American Anthropological Association

Arthur M. Phillips, III, Ph.D.
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P.O. Box 201
Flagstaff, Arizona 86002

602 779-2288

HUALAPAI ETHNOBOTANICAL ✓

NATIVE SPECIES PLANT STUDY

INITIAL RECONNAISSANCE RIVER TRIP

TRIP REPORT

June 12-15, 1994

Prepared by

Arthur M. Phillips, III, Ph.D.

Trip Botanist

29 June 1994

INTRODUCTION

For several months, I have been discussing the possibility of setting up a long-term monitoring program for Hualapai culturally significant plant species in portions of the Grand Canyon that lie within the Hualapai Reservation. Preliminary discussions about such a project have been conducted with staff members of the Hualapai Natural Resources Department and with Glen Canyon Environmental Studies personnel. The project would be funded by GCES through the Hualapai Tribe. A four-day river trip through the lower Grand Canyon was conducted June 12-15, 1994, as an initial reconnaissance of potential monitoring sites for native plant species having ethnobotanical or cultural significance to the Hualapai Tribe.

The purpose of the trip was twofold. The first was to take Hualapai Elders into the Grand Canyon to show them native plants growing in their natural habitats so that they would have an opportunity to identify and discuss plants of cultural importance. Second, the trip was an opportunity to assess the feasibility of establishing a long-term monitoring program for these species.

As trip botanist, my role was to provide (or verify) scientific and common names for plant species selected by the Elders and for which interviews were conducted by the ethnobotanist and Cultural Resources staff; to prepare species lists and habitat descriptions at sites where interviews were conducted; to select potential sites for monitoring regimes for these species; to assess the feasibility of establishing a monitoring program while in the field; and to assist in selecting sites for stops based upon my knowledge of where the best sites occur for encountering a large variety of species of potential cultural interest. When plants were encountered that I had not previously collected for the Hualapai Herbarium (as part of the Riparian Project), they were prepared as pressed specimens.

The trip launched from Diamond Creek on June 12th, 1994, with a crew of three Hualapai Tribal Elders, five staff members from Hualapai Cultural Resources Division, one ethnobotanist (Phyllis Hogan), one botanist (AMP), and two boatmen. Stops during the trip were intended to allow for the greatest possible diversity of sites, thus giving an opportunity to show the Elders a diversity of different plants. Due to early summer heat, afternoon stops were also planned to provide shade. As the original trip schedule was shortened by 1 1/2 days, it was decided to end the formal reconnaissance at Spencer Canyon, Mile 246 L, above the main influence of Lake Mead. However, my assessment of potential monitoring sites continued from the boat downstream to the western boundary of the Hualapai Reservation (Mile 273.4 L).

METHODS

The selection of interview or potential interview sites was based upon access for the Elders, potential occurrence of species of cultural interest, and trip logistics. Once a site was selected, I wrote up general habitat descriptions and prepared area species lists while interviews were carried out by the trip ethnobotanist and Cultural Resources staff.

In most cases, especially with riparian species, interviews were conducted where the plants were growing. Some species were located nearby, in areas difficult for the Elders to reach, and samples of the plants large enough for them to recognize were brought to them. When this occurred, they were shown where the plants grew, and the habitat was described to them. In two cases, interviews were conducted at places other than where the plants occurred.

The identification of potential monitoring sites was based upon the following factors:

- location within GIS long-term monitoring areas
- presence of cluster of enough individuals of one or more species of cultural interest
- sites which are indicators of the overall health of the ecosystem
- degree to which the site is representative of the species and its typical habitat
- location within the zone influence of varying river flows
- location at sites having other cultural or scientific interest (e.g., Spencer Canyon)
- ease of site relocation
- potential for disturbance by recreationists (camping or attraction areas)

RESULTS

A total of 18 species of plants was identified by the Hualapai Elders as having some degree of cultural significance. The list of plants with their English and scientific names, along with the site at which initial interviews were conducted, is in Table 1.

"Formal" stops, where interviews were carried out or where the opportunity for interviews was offered, were made at the following locations:

- Mile 228 L, first day lunch stop (no interviews)
- Mile 230.5 L, Travertine Falls (interviews for Species 1-4)
- Mile 236.5 L, first night's camp (interviews for Species 5-12)
- Mile 239.5 R, Separation Canyon (no interviews)
- Mile 243.5 L, second day lunch stop (interview for Species 13)
- Mile 246 L, Spencer Canyon, second night's camp (interviews for Species 14-16)

Species lists and habitat descriptions for these sites are included as Appendix 1. The lists do not include a few plants that were collected and have not yet been identified.

Interviews for Species 17 and 18, arrowweed and Whipple yucca, were not conducted at specific sites where the plants were found. The Elders' familiarity with these species was confirmed at sites where they were observed.

Potential monitoring sites were identified for 11 species at 23 different locations during the trip. Generally, these were plants that occur in clusters, and most of those for which potential sites were noted occur in the riparian zones along the Colorado River and in side canyons. In some cases, sites could serve as monitoring sites for more than one culturally sensitive species, or several separate plots could be established for several species at the same site. A listing of potential monitoring sites by species is presented in Appendix 2.

Table 1. Hualapai Culturally Sensitive Plants Identified on June, 1994 River Trip

Common Name	Scientific Name	Interview Site
1. Broad-leaved cattail	*Typha latifolia*	Travertine Falls 230.5L
2. Wild tobacco, desert tobacco	*Nicotiana trigonophylla*	Travertine Falls 230.5L
3. Desert trumpet	*Eriogonum inflatum*	Travertine Falls 230.5L
4. Seep-willow	*Baccharis salicifolia*	Travertine Falls 230.5L
5. California barrel cactus	*Ferocactus acanthodes*	Camp -- 236.5L
6. Trixis	*Trixis californica*	Camp -- 236.5L
7. Snakeweed	*Gutierrezia microcephala*	Camp -- 236.5L
8. Catclaw acacia	*Acacia greggii*	Camp -- 236.5L
9. Torrey mesquite	*Prosopis glandulosa* var. *torreyana*	Camp -- 236.5L
10. Nevada Mormon-tea, Indian tea	*Ephedra nevadensis*	Camp -- 236.5L
11. Creosotebush	*Larrea tridentata*	Camp -- 236.5L
12. Camel-thorn	*Alhagi camelorum*	Camp -- 236.5L
13. Giant reed	*Phragmites australis*	243.5L
14. Goodding willow	*Salix gooddingii*	Spencer -- 246L
15. Coyote willow	*Salix exigua*	Spencer -- 246L
16. Fremont cottonwood	*Populus fremontii*	Spencer -- 246L
17. Arrowweed	*Tessaria sericea*	
18. Whipple yucca	*Yucca whipplei*	

APPENDIX 1

Site descriptions and species lists at interview sites and "formal" stops.
Culturally sensitive plants are in bold type within species lists.

Site 1 -- Mile 228 L

Small sandy beach with three levels representing different flows. Lower level has saltcedar seedlings and horsetails, and the second level has *Andropogon, Brickellia longifolia,* and *Conyza canadensis*

Acacia greggii	**Catclaw acacia**
Andropogon glomeratus	Bushy beardgrass
Aristida purpurea	Purple three-awn
Bebbia juncea	Chuckwalla's delight
Brickellia longifolia	Longleaf brickell-bush
Conyza canadensis	Horseweed
Cynodon dactylon	Bermuda grass
Equisetum laevigatum	Smooth scouring rush, horsetail
Ferocactus acanthodes	**California barrel cactus**
Fouquieria splendens	Ocotillo
Galium stellatum	Desert bedstraw
Haplopappus acradenius	Goldenweed
Haplopappus spinulosus	Spiny goldenweed
Melilotus alba	White sweet-clover
Polypogon monspeliensis	Rabbitfoot grass
Sporobolus airoides	Alkali sacaton
Tamarix chinensis	Seepwillow

Site 2 -- Mile 230.5 L (Travertine Falls)

Study area is in shaded riparian area along creek near Colorado River. This area is on an upper beach and is dominated by saltcedar. Vegetation along the creek is fairly dense, and leads about 200 m to Travertine Falls, which has typical seep and spring plants on its cliffs. The sand dune between the falls and the river is fairly large, rocky, open, and has primarily desert species.

Interview species:

Plant #1:	**Broad-leaved cattail**	***Typha latifolia***
Plant #2:	**Desert tobacco**	***Nicotiana trigonophylla***
Plant #3:	**Desert trumpet**	***Eriogonum inflatum***
Plant #4:	**Seepwillow**	***Baccharis salicifolia***

Acacia greggii	**Catclaw acacia**
Adiantum capillus-veneris	Maidenhair fern
Agave utahensis	Utah agave
Alhagi camelorum	**Camelthorn**
Aristida purpurea	Purple three-awn
Baccharis salicifolia	**Seepwillow**
Bebbia juncea	Chuckwalla's delight
Bromus rubens	Red brome
Cirsium sp.	Thistle
Conyza canadensis	Horseweed
Cynodon dactylon	Bermuda grass
Encelia farinosa	Brittlebush
Ephedra nevadensis	**Nevada Mormon-tea, Indian tea**
Equisetum laevigatum	Smooth scouring rush, horsetail
Eriogonum inflatum	**Desert trumpet**
Eriogonum wrightii	Wright shrubby wild buckwheat

Ferocactus acanthoses	**California barrel cactus**
Fouquieria splendens	Ocotillo
Gutierrezia microcephala	**Snakeweed**
Haplopappus acradenius	Goldenweed
Juncus acutus	Spiny rush
Melilotus alba	White sweet-clover
Mimulus cardinalis	Cardinal monkeyflower
Nicotiana trigonophylla	**Desert tobacco**
Opuntia whipplei	Whipple cholla
Polypogon monspeliensis	Rabbitfoot grass
Porophyllum gracile	Poreleaf
Prosopis glandulosa **var.** ***torreyana***	**Torrey mesquite**
Tamarix chinensis	Tamarisk, salt-cedar
Typha latifolia	**Broad-leaved cattail**

Site 3 -- Mile 236.5 L

Large bouldery dune with an aeolian sandy slope well above high water line. The dune has an exceptionally large amount of natural vegetation as well as openings and areas of shifting, unstabilized sands in wind-blown portions. Camelthorn is becoming dominant on the lower portions of the dune representing recent (1983?) inundation. The site is infrequently used as a camp, so vegetation has been little disturbed by recreational activities.

Interview species:

Plant #5:	**California barrel cactus**	***Ferocactus acanthodes***
Plant #6:	**Trixis**	***Trixis californica***
Plant #7:	**Snakeweed**	***Gutierrezia microcephala***
Plant #8:	**Catclaw acacia**	***Acacia greggii***
Plant #9:	**Torrey mesquite**	***Prosopis glandulosa*** **var.** ***torreyana***
Plant #10:	**Nevada Mormon-tea, Indian tea**	***Ephedra navadensis***
Plant #11:	**Creosotebush**	***Larrea tridentata***
Plant #12:	**Camelthorn**	***Alhagi camelorum***

Acacia greggii	**Catclaw acacia**
Alhagi camelorum	**Camelthorn**
Aristida purpurea	Purple three-awn
Bebbia juncea	Chuckwalla's delight
Bromus rubens	Red brome
Camissonia multijuga	
Conyza canadensis	Horseweed
Cynodon dactylon	Bermuda grass
Echinocereus engelmannii	Engelmann hedgehog
Encelia farinosa	Brittlebush
Ephedra nevadensis	**Nevada Mormon-tea, Indian tea**
Eriogonum wrightii	Wright shrubby wild buckwheat
Eucnide urens	Rock nettle
Ferocactus acanthodes	**California barrel cactus**
Fouquieria splendens	Ocotillo
Galium stellatum	Desert bedstraw
Gutierrezia microcephala	**Snakeweed**
Haplopappus acradenius	Goldenweed
Haplopappus spinulosus	Spiny goldenweed
Larrea tridentata	**Creosotebush**
Mammillaria tetrancistra	Corky-seed fishhook cactus
Melilotus alba	White sweet-clover
Oenothera pallida	Pale evening primrose
Peucephyllum schottii	Pygmy cedar
Porophyllum gracile	Poreleaf
Salix gooddingii	**Goodding willow**

Sporobolus airoides	Alkali sacaton
Sporobolus giganteus	Giant dropseed
Stephanomeria exigua	Wire lettuce
Tamarix chinensis	Tamarisk, saltcedar
Trixis californica	**Trixis**
Yucca whipplei	**Whipple yucca**

Site 4 -- Mile 239.5 R (Separation Canyon)

Following a recent scouring flood along the floor of Separation Canyon, a number of species of plants have germinated in the coarse gravel floor of the drainage. The site consists of a number of microhabits with various levels of gravel benches and different amounts of silts and sand. The species list reflects plants observed along the canyon floor, except for those marked with an asterisk (*) which were noted only on talus slopes above the canyon floor. There were no interview species at this site.

Acacia greggii	**Catclaw acacia**
Baccharis salicifolia	**Seepwillow**
Bromus rubens	Red brome
Camissonia multijuga	
Conyza canadensis	Horseweed
Cynodon dactylon	Bermuda grass
Datura meteloides	Sacred datura
Encelia farinosa	Brittlebush
Ephedra nevadensis *	**Navada Mormon-tea, Indian tea**
Eriogonum wrightii *	Wright shrubby wild buckwheat
Ferocactus acanthoses *	**California barrel cactus**
Gnaphalium chilense	Cudweed
Hedeoma sp.	Pennyroyal
Juncus torreyi	Torrey rush
Lactuca serriola	Prickly lettuce
Larrea tridentata *	**Creosotebush**
Lepidium lasiocarpum	Peppergrass
Maurandya antirrhiniflora	Twining snapdragon
Mentzelia sp.	Stickleaf
Nicotiana trigonophylla	**Desert tobacco**
Oenothera caespitosa	Evening primrose
Oenothera pallida	Pale evening primrose
Opuntia phaeacantha *	Prickly pear cactus
Physalis crassifolia	Thick-leaved ground-cherry
Polypogon monspeliensis	Rabbitfoot grass
Porophyllum gracile *	Poreleaf
Solanum douglasii	Nightshade
Sphaeralcea grossulariaefolia	Gooseberryleaf globemallow
Tamarix chinensis	Tamarix, saltcedar
Tessaria sericea	**Arrowweed**
Tidestromia lanuginosa	Woolly tidestromia

Site 5 -- Mile 243.5 L

A stop was made at a large, dry marsh along the shore in an open area without a closed canopy of trees. Giant reed was the dominant species in this area. A number of wet marsh plants were present, but their status as uncommon members of the community attest to the relative dryness of the site. The stop was made specifically to obtain an interview on giant reed.

Interview species:

Plant #13: Giant reed ***Phragmites australis***

Agrostis semiverticillata	Waterbent grass
Baccharis salicifolia	**Seepwillow**
Conyza canadensis	Horseweed
Gnaphalium chilense	Cudweed
Juncus torreyi	Torrey rush
Lactuca serriola	Prickly lettuce
Melilotus alba	White sweet-clover
Phragmites australis	**Giant reed**
Plantago major	Common plantain
Polypogon monspeliensis	Rabbitfoot grass
Solidago altissima	Tall goldenrod
Sonchus oleraceus	Common sow-thistle
Tamarix chinensis	Tamarisk, saltcedar
Tessaria sericea	**Arrowweed**

Site 6 -- Mile 246 L (Spencer Canyon)

A major flash flood in early 1993 scoured out the dense side canyon riparian community along the floor of Spencer Canyon and initially left a scene of dramatic devastation, a gravel canyon floor nearly devoid of vegetation except for a few isolated surviving trees. In the intervening year and a half, plants have made a rapid recovery in Spencer, evidence of how well adapted riparian species are to such events. Trees have recovered from the buried limbs toppled by the flood, and many have grown to 6-12 feet tall. Herbaceous species now grow vigorously along the canyon floor. The stream has developed a channel which it has rarely left since the flood. The densest vegetation recovery has occurred near the mouth of the canyon, where much debris was deposited at the time of the flood. Recovery has been slower upstream, where most wood was washed through during the scouring flood. Spencer Canyon is now in a very dynamic stage of re-vegetation, and monitoring plots established here will not only track culturally sensitive species but will also serve to document vegetation invasion and re-establishment along the canyon floor.

Interview species:

Plant #14: Goodding willow	***Salix gooddingii***
Plant #15: Coyote willow	***Salix exigua***
Plant #16: Fremont cottonwood	***Populus fremontii***

Agrostis semiverticillata	Waterbent
Allionia incarnata	Trailing four-o'clock
Artemisia ludoviciana	Louisiana wormwood
Bebbia juncea	Chuckwalla's delight
Bromus rubens	Red brome
Camissonia multijuga	
Centaurium calycosum	Buckley's centaury
Datura meteloides	Sacred datura
Dyssodia pentachaeta	Dogweed
Encelia farinosa	Brittlebush
Ephedra nevadensis	**Nevada Mormon-tea, Indian tea**
Erigeron divergens	Fleabane
Eriogonum fasciculatum	Mohave buckwheat
Eriogonum inflatum	**Desert trumpet**
Glandularia gooddingii	Goodding verbena
Gnaphalium chilense	Cudweed
Gutierrezia microcephala	**Snakeweed**
Hedeoma sp.	Pennyroyal
Lactuca serriola	Spiny lettuce
Lepidium lasiocarpum	Peppergrass
Marrubium vulgare	Horehound
Maurandya antirrhiniflora	Twining snapdragon
Melilotus alba	White sweet-clover
Mimulus guttatus	Yellow monkeyflower

Nasturtium officinale	Water-cress
Nicotiana trigonophylla	**Desert tobacco**
Oenothera caespitosa	Evening primrose
Perityle emoryi	Emory rock daisy
Physalis crassifolia	Thick-leaved ground cherry
Plantago major	Common plantain
Pleurocoronis pluriseta	Arrowleaf
Pluchea purpurascens	Canela
Polypogon monspeliensis	Rabbitfoot grass
Populus fremontii	**Fremont cottonwood**
Porophyllum gracile	Poreleaf
Prosopis glandulosa **var.** ***torreyana***	**Torrey mesquite**
Rumex crispus	Curly dock
Salix exigua	**Coyote willow**
Salix gooddingii	**Goodding willow**
Senna covesii	Desert senna
Sphaeralcea ambigua	Desert globemallow
Tamarix chinensis	Tamarisk, saltcedar
Tessaria sericea	**Arrowweed**
Typha latifolia	**Broad-leaved cattail**
Vernoica anagallis-aquatica	Water speedwell
Viguiera deltoidea	Triangle-leaf viguiera

APPENDIX II

Potential monitoring sites noted for Hualapai culturally sensitive plants, by river mile

Alhagi camelorum (Camelthorn)

228.2 R
236.5 L

Baccharis salicifolia (Seepwillow)

238.5 L
248.9 L
250 L
251.9 R
253 L
254.5 L
255.7 L
256.6 L

Ferocactus acanthodes (California barrel cactus)

246 R

Nicotiana trigonophylla (Desert tobacco)

246 L

Phragmites australis (Giant reed)

243.5 L
246 R
250.7 R
251.9 R
252.2 L
255.7 L
259.6 R

Populus fremontii (Fremont cottonwood)

246 L

Prosopis glandulosa var. *torreyana* (Torrey mesquite)

246 L

Salix exigua (Coyote willow)

246 L
252.3 R
253 L
255.5 R
255.7 L

Salix gooddingii (Goodding willow)

246 L

Tessaria sericea (Arrowweed)

243.5 R
250.7 R

Typha latifolia (Broad-leaved cattail)

230.5 L
237 L
238.5 L
246 L
248.5 R
259.6 R

ETHNOBOTANICAL FIELD REPORT

COLORADO RIVER TRIP, JUNE 1994

NATIVE PLANT SPECIES STUDY - INITIAL RECON

SUBMITTED TO LORETTA JACKSON

HUALAPAI CULTURAL RESOURCES DIVISION DIRECTOR

FROM PHYLLIS HOGAN

ARIZONA ETHNOBOTANICAL RESEARCH ASSOCIATION

EXECUTIVE DIRECTOR

JUNE 30, 1994

The purpose of this research trip was to conduct an initial reconnaissance of culturally sensitive native plant species that may be impacted by the fluctuating flows of the Colorado River stemming from the Glen Canyon Dam operations. The launching date was June 11, 1994, from Diamond Creek. River take-out date was June 14, 1994, at Pierce Ferry. The principal investigator was Loretta Jackson, Cultural Resources Coordinator for the Hualapai Tribe, and assisting her were Art Phillips, Botanist, Phyllis Hogan, Ethnobotanist, and three staff members from the Hualapai Cultural Resources Division. Members of the Cultural Resource Staff assisted in conducting interviews and also gave vital information concerning some of the plants. The following list and information was given by two Hualapai and one Havasupai cultural scholars. As far as is possible, their exact wording is used below.

1. Broad-leaved cattail, Typha latifolia, Interview Site - Travertine Falls, 2305L:

Hualapai Name: Hamsi iv. Parts used - stems, leaves, flowers, roots, and bulbs. Pollen and gray clay are mixed together to paint face and dance. A dance called Hamsi iv in Supai is conducted by decorating the body with cottonwood leaves, including a skirt, and then cottonwood leaves are placed on the head and forehead, and they dance like kachinas. Figurine toys were made with the dried leaves of the plant. They were rehydrated to make toys. These artifacts were found by the Virgin River, also Black Mountain, and Bighorn Cave. BLM has the materials. The long leaves are wrapped around willow, and this frame is used for the hoop game. The roots are cut up like onions and put into a stew for eating.

2. Wild tobacco, desert tobacco, Nicotiana trigonophylla, Interview Site - Travertine Falls, 230.5L:

Hualapai Name: U:v. Parts used - leaves. Hualapai used the smoke from the plant to keep evil spirits away. Smoke in paper or burn. Blow smoke on a sick person's body. This plant is sacred to the Hualapai. Dry the leaves. Sprinkle the seeds on coals when story-telling or when you are praying. To make medicine, get droppings from a baby cottontail. Mix with dry leaves, grind, and put in a pouch. Then smoke it in a pottery pipe that has a stem.

3. Desert trumpet, Eriogonum inflatum, Interview Site - Travertine Falls, 230.5L:

Hualapai Name: dal dal. Parts used - stem. The stems played a part in legends. The stems are used to make a whistle for a toy.

4. Seep-willow, Baccharis salicifolia, Interview Site - Travertine Falls, 230.5L

Hualapai Name: Hamd avil. Parts used - stems. The split stems are used for making coil baskets

5. California barrel cactus, Ferocactus acanthodes, Interview Site - Camp, 236.5L:

Hualapai Name: Mild ad. Parts used - whole plant. The cactus is used in earth oven pits as a form of moisture for the viyal. The fruits are eaten. Inside juice can be used for a drink. We eat the barrel cactus just like a watermelon. It can be barbecued. Use it when you need water. Use a long knife, roast it, and put salt on it.

6. Trixis, Trixis californica, Interview Site - Camp, 236.5L:

No Hualapai name. The plant is considered a lady. Legend; a man and woman were married. She went away and turned into a plant. A song goes along with the legend. (Note: This plant might be confused with wild tobacco.)

7. Snakeweed, Gutierrezia microcephala, Interview Site - Camp, 236.5L:

Hualapai Name: Gohwa:yo. Parts used - stems and leaves. The stems and leaves are used to clean the prickly pear, to brush off the stickers of the pads.

8. Catclaw acacia, Acacia greggii, Interview Site - Camp, 236.5L:

Hualapai Name: Gijes. Parts used - roots and branches. Branches for spudi. Roots are for the round frame of the cradleboard.

9. Torrey mesquite, Prosopis glandulosa var. torreyana, Interview Site - Camp ,236.5L

Hualapai Name: Na:l. Parts used - fruit. The dry pods are picked and pounded on rocks, soaked in water, strained, sugar is added, drink like squawberry.

10. Nevada Mormon tea, Indian tea, Ephedra nevadensis, Interview Site - Camp,236.5L

Hualapai Name: Jumway. Parts used - stems. A tea of the stems is used for kidney ailment. This plant can cure VD. It cleans you out.

11. Creosote bush, Larrea tridentata, Interview Site - Camp, 236.5L:

Hualapai Name: Ivthi:. Parts used - leaves. Medicine men boil the fresh leaves with turquoise. It can be real strong. Gargle and spit it out for tooth-ache. Make a powder for sores, chicken pox, and measles. They pick it near Kingman. The bands from Kingman know about it. It is used at Medicine Men reunion with the turquoise.

12. Camel-thorn, Alhagi camelorum, Interview Site - Camp, 236.5L:

Hualapai Name: Adat. Parts used - fruits. This plant grows near the river and is hard to pull out. It has red berries with stickers. Eat the seeds. Pick the seeds and eat. (Note: This is an exotic plant and probably has not been growing on the Reservation very long. He may be getting this confused with another plant.)

13. Giant reed, Phragemites australis, Interview Site - 243.5L:

Hualapai Name: Ata. Parts used - stems. Hollow out the stems and use for pipe stems. To get the stems straight, place in hot ashes. They are also used for bow and arrow. Add feathers to the top. Boys blow sand at the girl they love through the hollow stem. If it hits her, she will love him.

14. Goodding willow, Salix gooddingii, Interview Site - Spencer, 246L:

Hualapai Name: Iyo. Parts used - stems. The best time to pick this plant is July and August. We use it for coil baskets, flat baskets, burden baskets, but not cradles. If the Hualapai can't get squaw bush, this is a substitute. We use the small branches. Sometimes they are dyed. We split the branches with our teeth. In the coil basket, the devil's claw is used for the black part of the design.

15. Coyote willow, Salix exigua, Interview Site - Spencer, 246L:

Hualapai Name: E' ho'. Parts used - stems. We make baskets with these branches. It's the same as the other willow. (Salix gooddingii) Strip the leaves and split the branches, using your teeth. The inside of the branch needs to be white, so we pick it in August or September. We make burden baskets and water jars, the kind that you put pine pitch over. The outer part of this willow can be used for a design. If the branches get hard and brittle, place them in the sand. Then you can use them again.

16. Fremont cottonwood, Populus fremontii, Interview Site - Spencer, 246L:

Hualapai Name: Aha:. Parts used - leaves, branches, and trunk. We make the shade house out of leaves and branches. We use the branches for baskets. To make a drum, you hollow out and scrape the inside of the trunk. The branches with the leaves on it are tied around the arms and the body. When they dance they call this kachinas. Some contemporary artists use the roots for carving.

17. Arrowweed, Tessaria sericea:

Hualapai Name: I'thav. Parts used - branches. The branches are used for the cradleboard bed. We make arrow shafts out of the branches and thatch for houses.

18. Banana yucca, Yucca whipple:

Hualapai Name: Manad. Parts used - fruit, roots, leaves. The root is mixed with pine sap to apply to water jugs. We also use the root to apply our face paint so your hands won't get red. We use yucca shampoo on our hair so it won't turn gray. We use the leaves to make baskets, ropes, and sandals.

MISCELLANEOUS ETHNOBOTANICAL NOTES:

Day 2, June 13, 1994: We talked about the saguaro cactus and the grandmothers told us about how this cactus was once alive. If you see two growing together, one is carrying a child. Pick the fruit with a long stick, dry, and eat it, or eat it fresh. It looks like a strawberry. We make a drink out of the fruit, too.

There are certain places to pick the viyal (agave). Those places you can get the real sweet kind. The viyal inside is very heavy. Cottonwood was used for a digging tool. We carved it in the shape of a boat paddle.

Plants that belong to animals, we should not pick. Red tulip-like flowers belong to the snake. Don't pick a certain yellow flower or you will get a tooth-ache.

Emmett picked a Rumex crispus, (Thi' hach) and he showed it to me. He said it was a sister plant to the R. hymenosepalus. Strip the airial parts, cut the stalk, and make tea. Add sugar and drink like lemonade.

When we did the interviews, Emmett did not recognize solanum douglasii (Nightshade). Later in the afternoon, he saw it growing in another place, looked at the berries, and asked me if we had talked about this plant. I explained that we had, but he didn't tell me anything about it when we interviewed. He then said, "Well, we eat these," referring to the fruit.